

WHAT IS CLAIMED IS:

1. An immunogenic composition comprising dissociated pili from a Gal-Gal binding pilus-producing bacteria, said pili comprising at least one immunogenic peptide inserted into the immunodominant region of PapA that does not normally contain said peptide and a pharmaceutically acceptable carrier.

2. An immunogenic composition as claimed in claim 1, wherein the pili are dissociated from a pilus-producing bacteria having at least one mutation that facilitates detachment of the pili from the bacteria relative to a wild type strain.

3. A vaccine for preventing urinary tract infections or other microbial infections/diseases if a corresponding protective epitope is inserted into the immunodominant region of PapA comprising an immunogenic composition as claimed in claim 1.

4. A process for producing pili comprising culturing a recombinant Gal-Gal pilus-producing bacteria wherein said pili comprise at least one immunogenic peptide inserted into an immunodominant PapA region that does not normally contain said peptide and recovering dissociated pili.

5. A process as claimed in claim 4, wherein the bacteria has at least one mutation that facilitates detachment of the pili from the bacteria relative to a wild type strain.

6. A process for producing a vaccine comprising formulating a vaccine comprising pili produced according to claim 4 or rendering protein based haptens immunogenic by the carrier effect of fusion with PapA sequences at this location.

7. A method of treating or preventing a urinary tract infection or other microbial infections/diseases comprising administering to a subject in need thereof a vaccine of claim 3.